

## CLAIMS

We claim:

1. A method for processing data to be transmitted on a transmission medium, said method comprising:
  - a) storing in memory a segment of data to be transmitted wherein said segment of data is larger than the largest size of a single data packet allowed for transmission by said transmission medium;
  - b) processing said segment to produce an array of linked data blocks wherein each data block is smaller than said largest size wherein said b) is performed by a socket layer;
  - c) adding a first header to each block of said array of linked data blocks, wherein said c) is performed by a TCP layer;
  - d) adding a second header to each block of said array of linked data blocks, wherein said d) is performed by an IP layer; and
  - e) identifying blocks of said array to a communication subsystem for communication over said transmission medium.
2. A method as described in Claim 1 wherein said transmission medium comprises a transmission protocol.
3. A method as described in Claim 2 wherein said transmission protocol is a packetized protocol.

4. A method as described in Claim 3 wherein said packetized protocol is TCP/IP.
5. A method as described in Claim 1 wherein said communication subsystem is a network interface card (NIC).
6. A method as described in Claim 5 wherein said e) comprises identifying said blocks of said array one block at a time to said NIC and wherein said e) is performed by said IP layer.
7. A method as described in Claim 6 further comprising said NIC accessing said one block at a time and transmitting said one block at a time as a data packet over said transmission medium.
8. A method as described in Claim 5 wherein said e) comprises identifying at one time all of said blocks of said array to said NIC and wherein said e) is performed by said IP layer.
9. A method as described in Claim 8 further comprising said NIC accessing said array and transmitting one block at a time as a data packet over said transmission medium.
10. A method as described in Claim 5 wherein said array comprises a plurality of linked messages wherein each message comprises a plurality of linked data blocks and wherein said e)

comprises identifying one message at a time to said NIC and wherein said e) is performed by said IP layer.

11. A method as described in Claim 10 further comprising said NIC accessing each message and transmitting one block at a time as a data packet over said transmission medium.

12. A method as described in Claim 5 further comprising said NIC transmitting each block of said array over said transmission medium one block at a time as a data packet over said transmission medium.

13. A method as described in Claim 1 wherein said a) is performed by an application layer.

14. A method as described in Claim 1 wherein said first header is a TCP header and wherein said second header is an IP header.

15. A method as described in Claim 1 wherein each block of said array is approximately 1,500 bytes in length.

16. A method as described in Claim 1 wherein said blocks of said array are linked by memory address pointers stored therein.

17. A method for processing data to be transmitted on a transmission medium, said method comprising:

a) storing in memory a segment of data to be transmitted wherein said segment of data is larger than the largest size of a

single data packet allowed for transmission by said transmission medium;

b) processing said segment to produce an array of linked data blocks wherein each data block is smaller than said largest size wherein said b) is performed by a socket layer;

c) adding a TCP header to each block of said array of linked data blocks, wherein said c) is performed by a TCP layer;

d) adding an IP header to each block of said array of linked data blocks, wherein said d) is performed by an IP layer; and

e) wherein said IP layer identifies blocks of said array to a network interface card (NIC) for communication over said transmission medium.

18. A method as described in Claim 17 further comprising said NIC transmitting each block of said array over said transmission medium as a data packet one block at a time.

19. A method as described in Claim 18 wherein said e) comprises identifying said blocks of said array one block at a time to said NIC.

20. A method as described in Claim 18 wherein said e) comprises identifying at one time all of said blocks of said array to said NIC.

21. A method as described in Claim 18 wherein said array comprises a plurality of linked messages wherein each message

comprises a plurality of linked data blocks and wherein said e) comprises identifying one message at a time to said NIC.

22. A method as described in Claim 18 wherein said a) is performed by an application layer.

23. A method as described in Claim 18 wherein each block of said array is approximately 1,500 bytes in length.

24. A method as described in Claim 18 wherein said blocks of said array are linked by memory address pointers stored therein.

25. A computer system comprising:

an application layer for storing in memory a segment of data to be transmitted wherein said segment of data is larger than the largest size of a single data packet allowed for transmission by a transmission medium;

a socket layer processing said segment to produce an array of linked data blocks wherein each data block is smaller than said largest size;

a TCP layer receiving an identifier of said array and in response thereto for adding a first header to each block of said array of linked data blocks; and

an IP layer receiving an identifier of said array and in response thereto for adding a second header to each block of

said array of linked data blocks wherein said IP layer also identifies blocks of said array to a communication subsystem for communication over said transmission medium.

26. A computer system as described in Claim 25 wherein said communication subsystem is a network interface card (NIC).

27. A computer system as described in Claim 26 wherein said IP layer identifies said blocks of said array one block at a time to said NIC.

28. A computer system as described in Claim 27 wherein said NIC accesses said one block at a time and transmits said one block at a time as a data packet over said transmission medium.

29. A computer system as described in Claim 26 wherein said IP layer identifies at one time all of said blocks of said array to said NIC.

30. A computer system as described in Claim 29 wherein said NIC accesses said array and transmits one block at a time as a data packet over said transmission medium.

31. A computer system as described in Claim 26 wherein said array comprises a plurality of linked messages wherein each

message comprises a plurality of linked data blocks and wherein said IP layer identifies one message at a time to said NIC.

32. A computer system as described in Claim 31 wherein said NIC accesses each message and transmits one block at a time as a data packet over said transmission medium.

33. A computer system as described in Claim 26 wherein said NIC transmits each block of said array over said transmission medium one block at a time as a data packet over said transmission medium.

34. A computer system as described in Claim 26 wherein said first header is a TCP header and wherein said second header is an IP header.

35. A computer system as described in Claim 26 wherein each block of said array is approximately 1,500 bytes in length.

36. A computer system as described in Claim 26 wherein said blocks of said array are linked by memory address pointers stored therein.